

by some small heterogeneous agil part of the Water, or Air, or Quick-silver, which appears like a bubble, and by its jumbling to and fro there is made way for the *heterogeneous Æther* to obtrude it self between the Glas and either of the other Fluids, the Gravity of *Mercury precipitates* it downward with very great violence; and if the Vessel that holds the restagnating *Mercury* be convenient, the *Mercury* will for a time *vibrate* to and fro with very large *reciprocations*, and at last will remain kept up by the pressure of the external Air at the height of neer thirty inches. And whereas it may be objected, that it cannot be, that the meer imbodying of the *Æther* between these bodies can be the cause, since the *Æther* having a free passage alwayes, both through the Pores of the Glas, and through those of the Fluids, there is no reason why it should not make a separation at all times whilst it remains suspended, as when it is violently dis-joyned by a shog. To this I answer, That though the *Æther* passes between the Particles, that is, through the Pores of bodies, so as that any chasme or separation being made, it has infinite passages to admit its entry into it, yet such is the tenacity or attractive virtue of Congruity, that till it be overcome by the meer strength of Gravity, or by a shog assisting that Conatus of Gravity, or by an agil Particle, that is like a leaver agitated by the *Æther*; and thereby the parts of the congruous substances are separated so far asunder, that the strength of congruity is so far weakened, as not to be able to reunite them, the parts to be taken hold of being removed out of the attractive Sphere, as I may so speak, of the congruity; such, I say, is the tenacity of congruity, that it retains and holds the almost contiguous Particles of the Fluid, and suffers them not to be separated, till by meer force that attractive or retentive faculty be overcome: But the separation being once made beyond the Sphere of the attractive activity of congruity, that virtue becomes of no effect at all, but the *Mercury* freely falls downwards till it meet with a resistance from the pressure of the *ambient* Air, able to resist its gravity, and keep it forced up in the Pipe to the height of about thirty inches.

Thus have I gently raised a Steel *pendulum* by a Loadstone to a great Angle, till by the shaking of my hand I have chanced to make a separation between them, which is no sooner made, but as if the Loadstone had retained no attractive virtue, the *Pendulum* moves freely from it towards the other side. So vast a difference is there between the attractive virtue of the *Magnet* when it acts upon a contiguous and upon a disjoyned body: and much more must there be between the attractive virtues of congruity upon a contiguous and disjoyned body; and in truth the attractive virtue is so little upon a body disjoyned, that though I have with a *Microscope* observed very diligently, whether there were any extraordinary *protuberance* on the side of a drop of water that was exceeding neer to the end of a green stick, but did not touch it, I could not perceive the least; though I found, that as soon as ever it toucht it the whole drop would presently unite it self with it; so that it seems an absolute contact is requisite to the exercising of the tenacious faculty of congruity.

Observ.

Observ. VII. Of some Phenomena of

These *Glass Drops* are small parcels of coarse grained *Metal* (as they call it) the Pots that contain the *Metal* (as they call it) end of an Iron Pipe; and being exceeding hot, and a sluggish fluid Consistence, are suffered to drop from of cold Water, and in it to lye till they be grown so

Some of these I broke in the open air, by snapping a small stem with my fingers, others by crushing it with my fingers; which I had no sooner done, then the whole drop fell violently, with a very brisk noise, into multitudes of small pieces, which were as small as dust, though in some there were pretty large, without any flaw at all, and others very irregular, by rubbing between ones fingers was easily reduced to powder, dispersed every way so violently, that some of them could not find, either with my naked Eye, or a *Microscope*, broken pieces were of a regular figure, nor any one of the most part those that flew off in large pieces, but were ched.

The ends of others of these drops I nipt off with my fingers, the ends of them lay buried under the water, which, like a ball, fell to pieces with as brisk a noise, and as strong a motion.

Others of these I tried to break, by grinding away with a stone, though I took a seemingly good one, and had ground away the thirds of the Ball, yet would it not fly to pieces, but by rubbing small rings of it would snap and fly off, not with much quick motion, leaving the Surface of the drop wholly unbranched or creased, which was easily discovered. This drop, after I had thus ground it, without at all that was not ground away, I caused to fly immediately by the nipping off the very tip of its slender end.

Another of these drops I began to grind away with a stone, but had not worn away on the stone above a quarter of the drop, when the whole drop flew with a brisk crack into sand or fine dust, it have held so long, had there not been a little ground away, as I afterwards found.

Several others of these drops I covered over with a skin of *Ichthyocolla*, which being very tough and very convenient substance for these tryals that I made, I say, several of these drops in this transparent skin, suffering them to hang by a string tied about the middle, were cold, and the skin pretty tough; then wrapped

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